

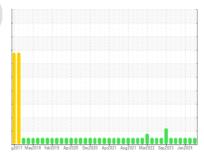
OIL ANALYSIS REPORT

Area (P633829) 3760C

Natural Gas Engine

Fluid

PETRO CANADA DURON GEO LD 15W40 (40 QTS)



Sample Rating Trend



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

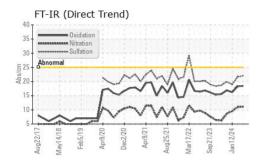
Fluid Condition

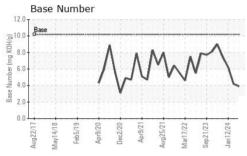
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

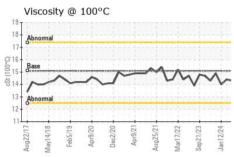
40 (410)						
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0101765	GFL0101763	GFL0101774
Sample Date		Client Info		09 Apr 2024	08 Apr 2024	12 Jan 2024
Machine Age	hrs	Client Info		16117	15997	15433
Oil Age	hrs	Client Info		600	600	600
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	13	14	10
Chromium	ppm	ASTM D5185m	>4	2	2	1
Nickel	ppm	ASTM D5185m	>2	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	2	2	2
Lead	ppm	ASTM D5185m	>30	1	1	<1
Copper	ppm	ASTM D5185m	>35	<1	<1	0
Tin	ppm	ASTM D5185m	>4	1	1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		<1	<1	0
ADDITIVES		method	limit/base	current	history1	history2
				_		
Boron	ppm	ASTM D5185m	50	8	9	22
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m	50 5	0	9	0
Barium	ppm	ASTM D5185m	5	0	0	0
Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m	5 50	0 56	0 56	0 48
Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0	0 56 1	0 56 1	0 48 <1
Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560	0 56 1 566	0 56 1 571	0 48 <1 560
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560 1510	0 56 1 566 1666	0 56 1 571 1680	0 48 <1 560 1481
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560 1510 780	0 56 1 566 1666 679	0 56 1 571 1680 694	0 48 <1 560 1481 783
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560 1510 780 870	0 56 1 566 1666 679 983	0 56 1 571 1680 694 1004	0 48 <1 560 1481 783 936
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560 1510 780 870 2040	0 56 1 566 1666 679 983 2577	0 56 1 571 1680 694 1004 2624	0 48 <1 560 1481 783 936 2415
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560 1510 780 870 2040	0 56 1 566 1666 679 983 2577	0 56 1 571 1680 694 1004 2624 history1	0 48 <1 560 1481 783 936 2415 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	5 50 0 560 1510 780 870 2040 limit/base >+100	0 56 1 566 1666 679 983 2577 current	0 56 1 571 1680 694 1004 2624 history1	0 48 <1 560 1481 783 936 2415 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	ASTM D5185m	5 50 0 560 1510 780 870 2040 limit/base >+100	0 56 1 566 1666 679 983 2577 current 5	0 56 1 571 1680 694 1004 2624 history1 6	0 48 <1 560 1481 783 936 2415 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m	5 50 0 560 1510 780 870 2040 limit/base >+100 >20	0 56 1 566 1666 679 983 2577 current 5 6	0 56 1 571 1680 694 1004 2624 history1 6 7	0 48 <1 560 1481 783 936 2415 history2 5 4
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	5 50 0 560 1510 780 870 2040 limit/base >+100 >20	0 56 1 566 1666 679 983 2577 current 5 6 2	0 56 1 571 1680 694 1004 2624 history1 6 7 2	0 48 <1 560 1481 783 936 2415 history2 5 4 2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560 1510 780 870 2040 limit/base >+100 >20 limit/base	0 56 1 566 1666 679 983 2577 current 5 6 2	0 56 1 571 1680 694 1004 2624 history1 6 7 2	0 48 <1 560 1481 783 936 2415 history2 5 4 2 history2 0
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	ASTM D5185m method ASTM D5185m ASTM D5185m *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7624	5 50 0 560 1510 780 870 2040 limit/base >+100 >20 limit/base	0 56 1 566 1666 679 983 2577 current 5 6 2 current 0	0 56 1 571 1680 694 1004 2624 history1 6 7 2 history1 0 11.0	0 48 <1 560 1481 783 936 2415 history2 5 4 2 history2 0 9.5
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m method ASTM D5185m ASTM D5185m *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7624	5 50 0 560 1510 780 870 2040 limit/base >+100 >20 limit/base	0 56 1 566 1666 679 983 2577 current 5 6 2 current 0 11.1 22.0	0 56 1 571 1680 694 1004 2624 history1 6 7 2 history1 0 11.0 21.6	0 48 <1 560 1481 783 936 2415 history2 5 4 2 history2 0 9.5 18.9
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAI	ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844 *ASTM D7844 *ASTM D7624 *ASTM D7415 method	5 50 0 560 1510 780 870 2040 limit/base >+100 >20 limit/base	0 56 1 566 1666 679 983 2577 current 5 6 2 current 0 11.1 22.0	0 56 1 571 1680 694 1004 2624 history1 6 7 2 history1 0 11.0 21.6 history1	0 48 <1 560 1481 783 936 2415 history2 5 4 2 history2 0 9.5 18.9 history2



OIL ANALYSIS REPORT



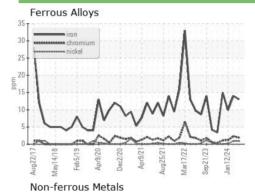


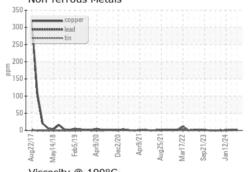


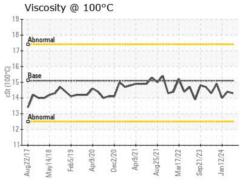
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

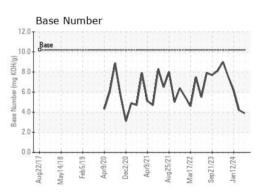
FLUID PROPI	ERTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.1	14.3	14.4	14.0

GRAPHS













Certificate 12367

Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0101765 Lab Number : 06144086

Unique Number : 10968894 Test Package : FLEET

Received : 10 Apr 2024 **Tested**

: 11 Apr 2024 Diagnosed : 11 Apr 2024 - Wes Davis

GFL Environmental - 030 - Conway Myrtle Beach

3010 HWY 378 Conway, SC US 29527

Contact: ARCILIO RUEZ aruiz@gflenv.com

To discuss this sample report, contact Customer Service at 1-800-237-1369. * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

T: F: